LYAKHOV, S.M.

Hydra in Volga benthos and plankton. Zool.zhur. 39 no.4:618-620 Ap '60. (MIRA 13:11)

1. Chair of General Biology, Kuybyshev Medical Institute.
(Volga River--Hydromedusae)

LYAKHOV, S.M.

Benthos of the Volga River near Kuybyshev and its dynamics. Trudy Inst. biol. vodokhran no.3:106-128 '61. (MIRA 14:3)
(Volga River--Benthos)

LYAKHOV, S.M.

Materials on benthic population of the Volga River in the section between Rybinsk and Astrakhan at the beginning of hydraulic reconstruction of the river. Trudy Inst.biol.vodokhran. no.4:187-203 '61. (MIRA 14:10)

(Volga River—Benthos)

LYAKHOV, S.M.

Formation of benthos in Stalingrad Reservoir during its first year of existence. Trudy Inst.biol.vodokhran. no.4:204-218 '61. (MIRA 14:10)

(Stalingrad Reservoir--Benthos)

LYAKHOV, S.M.

Flow of the benthos in the Volga River near Kuybyshev before the regulation of its streamflow. Trudy Gidrobiol. ob-va 11:150-161 '61. (MIRA 15:1)

1. Kafedra obshchey biologii Kuybyshevskogo meditsinskogo instituta, Kuybyshev.

(Volga River--Benthos)

LYAKHOV, S.M., kand.biolog.nauk (Komsomol'sk, Kuybyshevskaya obl.)

Protecting hydraulic structures against Dreissena fouling.
Priroda 51 no.7:106-108 Jl '62. (MIRA 15:9)
(Dreissenidae)

LYAKHOV, S.M.; MIKHEYEV, V.P.

Quantitative evaluation of the fouling fauna in Volga reservoirs by using diving devices. Trudy Inst. biol. vnutr. vod no.6:303-308 '63. (MIRA 18:1)

LYAKHOV, S.M.; MIKHEYEV, V.P.

Distribution and quantity of Dreissena in Kuybyshev Reservoir in the seventh year of its existence. Trudy Inst. biol. vnutr. voc no.7:3-18 '64. (MIRA 18:2)

1. Kuybyshevskaya stantsiya Instituta biologii vnutrennikh vod AN SSSR.

BIRYUKOV, I.N.; KIRPICHENKO, M.Ya.; LYAKHOV, S.M.; SERGEYEVA, G.I.

Living conditions of the mollusk Dreissena polymorpha Pallas in the Babinskiy Bay of the Oka River. Trudy Inst. biol. vnutr. vod no.7:38-46 '64. (MIRA 18:2)

1. Kuybyshevskaya stantsiya Instituta biologii vnutrennikh vod AN SSSR i Gor'kovskoye otdeleniye instituta "Giprotorfrazvedka".

LYAKHOV, S.M.

Work of the Institute of the Biology of Inland Waters of the Academy of Sciences of the U.S.S.R. on the protection of hydraulic structures from Dreissena overgrowth. Trudy Inst. biol. vnutr. vod. no.7:66-70 '64.

(MIRA 18:2)

LYAKHOV, V.K., inzhener.

Working frozen ground with a wedge shaped rammer. Mekh. stroi. 12 no.2:24 F '55. (MLRA 8:4)
(Frozen ground)

LYAKHOV, V.K., inzhener.

Working frozen ground with wedge-shaped drop weight. Mekh.stroi. 12 no.10:22-23 O '55. (MLRA 9:1)
(Frozen ground)

LYAKHOV, V.K., inzhener.

Structure of insoluble particles in used motor oil. Vest. mash. 36 no.8:35-36 '56. (MLRA 9:10)

(Lubrication and lubricants)

3514

S/147/61/000/004/013/021
E025/E120

96.5200

AUTHORS: Kudryashev, L.I., and Lyakhov, V.K.

TITLE: Calculation of the effect of longitudinal non-isothermalness on the heat transfer coefficient in the conditions of the internal problem

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, no.4, 1961, 104-110

TEXT: If for hydraulic smooth tubes a known pattern of turbulent flow is assumed, then the problem of determining the heat transfer coefficient can be reduced to a system of differential equations for the boundary layer. The equations are reduced to a simpler form, because the boundary layer is very thin; by assuming mean values for a number of parameters, and that the velocity and temperature satisfy power laws in the tube. An approximation is obtained for the local value of the Nusselt criterion and the mean value of the Nusselt number is calculated for the tube. A general form is given for the mean Nusselt number showing that if the physical parameters are determined for the mean temperatures of the flow and the heat transfer

Card 1/ 3

coefficient is also referred to the mean temperature then a correction must be introduced to take account of longitudinal non-isothermalness. These results were tested experimentally. The experiments were carried out for various amounts of longitudinal non-isothermalness from 2 to 30 °C. Diesel oil was used as the working liquid. The experimental results for heating and cooling are compared with a well known experimental formula and are in substantial agreement with it. However, there is a scatter of experimental points which is too great to be accounted for by experimental errors. Moreover, this scatter is a function of the temperature and parameters of the tube. On the other hand, by using separate equations for heat transfer on heating and cooling the scatter of points does not exceed 8% and this agrees with the formula derived from theoretical considerations. It is shown that the spread of the points is substantially decreased by taking account of non-isothermalness and a simple method of estimating the effect of longitudinal non-isothermalness is proposed for practical calculations.
There are 4 figures.
Card 2/3

Calculation of the effect of ... S/147/61/000/004/013/021
E025/E120

ASSOCIATION: Kafedra aerogidrodinamiki, Kuybyshevskiy aviatsionnyy institut
(Department of Aerohydrodynamics, Kuybyshev Aviation Institute)

SUBMITTED: August 6, 1960

Card 3/3

S/196/62/000/010/022/035
E073/E155

AUTHORS: Kudryashev, L.I., and Lyakhov, V.K.

TITLE: Influence of transverse and longitudinal non-isothermal conditions on the heat-transfer coefficient during turbulent flow of liquids in tubes of circular cross-section

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.10, 1962, 3, abstract 10 G17. (Tr. Kuybyshevsk. aviats. in-t, no.12, 1961, 145-154)

TEXT: Analysis of hydrodynamic and heat-transfer differential equations and thermal equilibrium equations shows that existing experimental data on heat transfer have to be considered as a particular case of small longitudinal temperature drops. Experimental data on heat transfer within a wide range of longitudinal non-isothermal conditions should include criteria which take into consideration the relations between the longitudinal and transverse temperature gradients. Theoretical conclusions are in fair agreement with experiment on heating liquids with various values of this temperature criterion. 7 references.

Card 1/1 [Abstractor's note: Complete translation.]

S/124/62/000/008/019/030
I054/I254

AUTHORS: Kudryashev, L.I. and Lyakhov, V.K.

TITLE: The influence of transversal and longitudinal temperature drop on the heat transfer coefficient in turbulent fluid flow in pipes with circular cross-section

PERIODICAL: Referativnyy zhurnal, Mekhanika, Svodnyy tom. no. 8B, 1962, 93, abstract 8B631 (Tr. Kuybyshevsk. aviats. in-t, no. 12, 1961, 145-154)

TEXT: It is pointed out in the work that the influence of the longitudinal non-isothermity [Abstractor's note: temperature drop] on the heat transfer coefficient was hitherto completely disregarded and that this influence is essential in this work. The authors mean by "the amount of non-isothermity" (the definition is not given) the temperature difference of the fluid at the inlet t' and outlet t" from the pipe. After a short review of differential equations for energy, continuity and motion, and indication of the strong influence of temperature on the viscosity (in natural-oil products), the equation for heat balance is given

$$\alpha \Delta t \pi d = \frac{\pi d^2}{4} \gamma \omega c_p (t' - t'')$$

Card 1/3

The influence of...

and rewritten in non-dimensional form

$$N = \frac{1}{2} Pe \frac{d}{l} \frac{\theta}{2 - \theta}$$

where Δt means the difference between the arithmetic average temperature of the fluid and the wall temperature t_w (the later is assumed as constant); N is the Nusselt number; Pe is Peckl's number; θ is "temperature criterion"

$$\theta = \frac{t' - t''}{t' - t_w}$$

The mean heat transfer coefficient α and the Nusselt number are determined according to the "temperature drop" Δt. The limiting cases where $\theta \to 0$ (short pipe) and $\theta \to 1$ (long pipe) are considered, and the authors come to the natural conclusion (with t_w = const) that N depends on θ (with increasing θ, N decreases; and when $\theta \to 1$ then $N \to 0$. The results of experiments carried out on pipes of various heat fluxes (with constant length) are presented as

$$\frac{N}{Pr^{0.4}} \left(\frac{P_f}{P_w} \right)^{-0.06} = f(R)$$

Card 2/3

The influence of...

S/124/62/000/008/019/030
I054/I254

Where P is the Prandtl number. Conclusions show an agreement with experimental data obtained by B.S. Petukhov (with an accuracy of ± 10%) and a confirmation of the dependence of N on θ. 7 Refs.

[Abstracter's note: Complete translation.]

Card 3/3

S/152/63/000/003/005/005
B117/B186

AUTHORS: Kudryashev, L. I., Lyakhov, V. K.

TITLE: Experimental study of the heat exchange when heating a turbulent liquid flow in round tube

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 3, 1963, 79-83

TEXT: The general character of the theoretical functions $Nu = f(Pr)$ was experimentally confirmed for the heating of liquids. Based on the equation

$$Nu = CRe^{n}Pr^{m} \quad (1),$$

which according to previous statements (B. S. Petukhov, V. V. Kirillov, "Teploenergetika" no. 4, 1958; A. I. Kudryashev, Sb. nauchnykh trudov, no. 7, "Teplotekhnika". Kuybyshevskiy industrial'nyy institut, 1957) is sufficient for generalizing the experimental data, C and m were experimentally determined in the present work for the range $Pr = 3 - 300$ with comparatively small changes of $Re = 10^4 - 10^5$. Diesel winter oil, diesel summer oil, and transformer oil were used for the experiments which were made according to a method described by V. L. Lel'chuk and

Experimental study of the heat ...

B. V. Dyadyakin ("Voprosy teploobmena", Izd-vo AN SSSR, 1959, p. 173-192). Experimental data found in publications for n-butyl alcohol and water were used for a more comprehensive generalization. The experimental data were evaluated by the method of successive approximation. The following ranges were found for which Eq. (1) can be used:

Pr = 3 - 10, C = 0.023, m = 0.4;
Pr = 10 - 30, C = 0.0264, m = 0.352;
Pr = 30.0 - 100, C = 0.0316, m = 0.3;
Pr = 100 - 300, C = 0.0367, m = 0.264.

The effect of the variability of physical parameters on the heat exchange $(\mu_f/\mu_w)^k$ could be objectively estimated during the experiments. In the range Pr = 100 - 280, k was found to be 0.16. This figure was higher than that found by other authors, which suggests a relation k = f(Pr). Further experiments are necessary to study this dependence. There are 2 figures and 3 tables.

Experimental study of the heat ... S/152/63/000/003/005/005
B117/B186

ASSOCIATION: Kuybyshevskiy aviatsionnyy institut
(Kuybyshev Aviation Institute);
Kuybyshevskiy politekhnicheskiy institut
(Kuybyshev Polytechnic Institute)

SUBMITTED: February 12, 1962

Card 3/3

LYAKHOV, V.K.

AID Nr. 987-5 11 June

DEPENDENCE OF HEAT TRANSFER COEFFICIENT ON LONGITUDINAL AND TRANSVERSE NONISOTHERMICITY IN TURBULENT FLUID FLOW (USSR)

Kudrashev, L. I., and V. K. Lyakhov. Inzhenerno-fizicheskiy zhurnal, no. 4, Apr 1963, 56-60. S/170/63/000/004/007/017

An analysis based on a two-boundary-layer model was made to derive generalized relationships for turbulent heat transfer, with allowance for transverse and longitudinal variations in physical properties. By introducing functions for mean thermal conductivity, viscosity, and specific heat into the equations for the laminar sublayer, the following expression, which allows for the effect of transverse nonisothermicity on heat transfer, was derived:

$$Nu_f = 0.023\, Re_f^{0.8}\, Pr_f^{0.43} \left(\frac{\mu_f}{\bar{\mu}}\right)^{0.32} \left(\frac{\bar{\lambda}}{\lambda_f}\right)^{0.52} \left(\frac{c_p\gamma}{c_{p_f}\gamma_f}\right)^{0.32}$$

[f refers to bulk flow, μ = viscosity, λ = thermal conductivity, and γ = density]. Data calculated by the formula were in good agreement with previous experimental

Card 1/2

DEPENDENCE OF HEAT TRANSFER COEFFICIENT [Cont'd] S/170/63/000/004/007/017

results obtained with viscous liquids at $Pr \gg 1$ and air at $Pr \approx 0.7$. The following formula was derived to express the effect of longitudinal isothermicity:

$$\theta = \frac{t' - t''}{t' - t_w} = cRe^n Pr^m \left(\frac{l}{d}\right)^k \left(\frac{\mu_f}{\mu_w}\right)^p,$$

where $t' - t''$ is the difference between inlet and outlet temperatures and t_w the mean wall temperature. Experimental data were correlated by this formula to within $\pm 8\%$, as compared with $\pm$ 15-20% obtainable by the empirical formula. The study was made at the Kuybyshev Aviation Institute.

[PV

KUDRYASHEV, L.I.; LYAKHOV, V.K.

Experimental study of heat exchange in heating turbulently flowing fluids in a circular tube. Izv. vysh. ucheb. zav.; neft' i gaz 6 no.3:79-83 '63. (MIRA 16:7)

1. Kuybyshevskiy aviatsionnyy institut i Kuybyshevskiy politekhnicheskiy institut.
(Turbulence) (Heat--Transmission)

L 11522-66 EWT(1)/EWT(m)/EPF(n)-2/EWG(m)/EWA(d)/ETC(m)-6/EWA(1)/EWP(m) WW/JD

ACC NR: AT6003080 SOURCE CODE: UR/3181/63/000/015/0151/0156

AUTHOR: Lyakhov, V.K.

ORG: None

TITLE: Dependence of the heat transfer and hydraulic resistance coefficients on the degree of longitudinal and transverse nonisothermicity in the turbulent motion of a fluid under the conditions of the internal problem

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas), 151-156

TOPIC TAGS: turbulent heat transfer, hydraulic resistance, thermodynamics, boundary layer theory, heat transfer coefficient, turbulent flow, laminar boundary layer, internal flow

ABSTRACT: The article is of a theoretical nature, without experimental data. The mathematical problem is formulated by the following system of differential equations:

Card 1/3

$$\frac{dp}{dz} = \frac{\partial}{\partial y}\left(\mu \frac{\partial w_z}{\partial y}\right); \quad \text{(a)}$$

$$c_p \gamma w_z \frac{\partial t}{\partial z} = \frac{\partial}{\partial y}\left(\lambda \frac{\partial t}{\partial y}\right); \quad \text{(b)} \qquad (2)$$

$$\mu = \mu(t);\ \lambda = \lambda(t);\ c_p = c_p(t);\ \gamma = \gamma(t). \quad \text{(c)}$$

In order that the system may satisfy the following condition:

$$\varphi = \frac{\int_{t_w}^{t_v} \gamma dt}{t_v - t_w}. \qquad (1)$$

where φ is the value of the physical parameter, t_w is the wall temperature, and t_v is the temperature at the boundary of the laminar sublayer, the following assumptions must be made: 1) the variable character of the physical parameters is independent for each parameter, that is, it must be possible to apply the principle of superposition to the individual parameters; and, 2) the variability of the viscosity is such that the difference between the thicknesses of the thermal and hydrodynamic layers disappears. Results of the calculations are presented in tabular form. A figure shows a comparison of curves calculated by

L 14522-66
ACC NR: AT6003080

the method proposed in the article with a curve calculated by the Hoffman formula. It is found that the curves coincide only in the regions Pr = 5-12 and μ_f/μ_w = 3-6. For 5 < Pr > 12, the curves diverge considerably. Orig. art. has: 14 formulas, 1 figure, and 1 table.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 004/ SOV REF: 000/ OTH REF: 001

Card 3/3

L 14665-66 EWT(1)/EWP(m)/EWT(m)/ETC( )/EWG(m)/EWA(d)/T/ETC(m)-6/EWA(1)
ACC NR: AT6003091 JD/WW/JW/DJ SOURCE CODE: UR/3181/63/000/015/0225/0236

AUTHORS: Kudryashev, L. I. (Professor, Doctor of technical sciences); Lyakhov, V.K.

ORG: Kuybyshev Aviation Institute (Kuybyshevskiy aviatsionnyy institut); Joint Scientific-Technical Conference on Problems of the Mechanics of Liquid and Gas (Kustovaya nauchno-tekhnicheskaya konferentsiya po voprosam mekhaniki zhidkosti i gaza)

TITLE: Analytic investigation of the effect of variable thermophysical properties of a fluid in turbulent nonisothermal motion in tubes

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas), 225-236

TOPIC TAGS: transport property, thermodynamic property, turbulent flow, heat transfer, Nusselt number, Reynolds number

ABSTRACT: Semi-empirical methods are given for incorporating variable thermophysical properties in nonisothermal turbulent flows of various fluids. The mean thermophysical property is defined by

Card 1/3

$$\bar{\varphi} = \frac{\int_{t_w}^{t_v} \varphi dt}{t_v - t_w}$$

where subscript v refers to conditions at the laminar sublayer. In general, the viscosity varies exponentially with the temperature

$$\varphi = \varphi_w \exp[-n(t - t_w)],$$

and, as a convenient approximation, the following relationship is introduced

$$\left(\frac{\bar{\varphi}}{\varphi_f}\right)^m = \left(\frac{\bar{\varphi}_f}{\varphi_w}\right)^n,$$

where subscript f refers to a mean heat-content temperature for the fluid. The variation of the index n/m is tabulated for various fluids, and it is found to change from a positive to a negative value as one goes from conditions of cooling to heating thermal transfer. A semi-empirical analysis yields for n and m

$$n = m\left\{\left[0{,}5 + 0{,}1\,\frac{t_v - t_w}{t_f - t_w}\lg\frac{\varphi_f}{\varphi_w}\right]\frac{t_v - t_w}{t_f - t_w} + k - 1\right\}$$

where the nondimensional temperature term is obtained from the turbulent flow heat transfer analysis

$$\frac{t_v - t_w}{t_f - t_w} = \frac{1}{1 + \Phi},$$

$$\Phi = \left[0{,}4\,Re_f^{0{,}13}\left(\frac{\mu_f}{\mu_w}\right)^{0{,}065}\left(\frac{\rho_f}{\rho_w}\right)^{0{,}065} - 0{,}8\right] \times \sqrt{Pr_f}^{\frac{2}{3}}\left(\frac{\mu_f}{\mu_w}\right)^{\frac{1}{3}}\left(\frac{C_{p_f}}{C_{p_w}}\right)^{\frac{1}{6}}\left(\frac{\lambda_f}{\lambda_w}\right)^{\frac{1}{3}}.$$

These last two expressions are then applied to a number of flow situations. These include: heat transfer and skin friction for air at Pr $\simeq$ 0.7; liquids such as oils under cooling and heating heat transfer; skin friction of liquids; and, finally, to conditions of near critical heat transfer conditions. All the results correlate well with experiments performed in tubes with the various fluids mentioned above. Orig. art. has: 29 equations, 9 figures, and 1 table.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 013/ OTH REF: 004

LYAKHOV, V. L.

AID P - 459

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 22/34

Author : Lyakhov, V. L., Eng.

Title : Selecting Voltage for Auxiliary Circuits of Steam Electric Power Plants (Comments)

Periodical : Elektrichestvo, 7, 87, Jl 1954

Abstract : Comments concerning an article of the above title published in Elektrichestvo, No. 11, 1948 by A. I. Sandler. The author of these comments points out certain mistakes in Sandler's formulas which resulted in the selection of 3 kv as voltage for auxiliary circuits, instead of 6 kv which for economic and technical reasons would be better.

Institution : None

Submitted : No date

LYAKHOV, V.L.

Preparing electrodes for electric spark marking using pulling through techniques. Stan. i instr. 28 no.5:32-35 My '57. (MLRA 10:6)
(Marking devices) (Electrodes)

LYAKHOV, V.L.

Unit for induction heating of billets. Mashinostroitel' no.7:
17 Jl '65. (MIRA 18:7)

LYAKHOV, V. N.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr. 1954)

Name	Title of Work	Nominated by
Lyakhov, V. N.	"An Album of Horse Breeds of the USSR"	Leningrad Agricultural Institute

SO: W-30604, 7 July 1954

LYAKHOV, Ye.I.

Measuring the operating and drop-out time of electromagnetic relays. Priborostroenie no.10:25-26 O '61. (MIRA 14:9)
(Electric relays) (Electronic instruments)

LYAKHOV, Ye.I.

Study of a band-pass amplifier with frequency dependent feedback.
Elektrosviaz' 18 no.3:59-66 Mr '64. (MIRA 17:4)

KOLTUN, L.I.; LYAKHOV, Yu.V.; [illegible], A.V.

Temperatures of the solutions of gas-liquid inclusions in minerals of the Savinskoye deposit No.5. Zap. Vses. m-va ob-va 92 no.3:327-334 '63. (MIRA 17:9)

KOLTUN, L.I.; LYAKHOV, Yu.V.; PIZNYUR, A.V.

Formation of axinites. Zap.Vses.min.ob-va 90 no.3:301-307 '61.
(MIRA 14:10)

1. L'vovskiy universitet.
(Axinite)

KALYUZHNYY, Vl.A.; LYAKHOV, Yu.V.

Cassiterite and fluorite inclusions in crystals of pegmatites from Volyn' Province. Dokl. AN SSSR 143 no.5:1182-1185 Ap '62. (MIRA 15:4)

1. Institut geologii poleznykh iskopayemykh AN USSR. Predstavleno akademikom V.S.Sobolevym.
(Volyn' Province--Pegmatites)

LYAKHOV, Yu.V.

Syngenetic inclusions of goethite and hematite in quartz crystals from pegmatites in Volyn'. Min. sbor. no.17:210-214 '63. (MIRA 17:11)

1. Gosudarstvennyy universitet imeni Franko, L'vov.

LYAKHOV, Yu.V.; PIZNYUR, A.V.

Syngenetic solid inclusions in minerals. Min.sbor. 18 no.2:165-174 '64. (MIRA 18:5)

1. Gosudarstvennyy universitet imeni Ivana Franko, L'vov.

LYAKHOV, Yu.V.; PIZNYUR, A.V.

Evaluation of the pressure of hydrothermal solutions. Min.sbor. 18 no.3:343-348 '64. (MIRA 18:8)

1. Gosudarstvennyy universitet imeni Ivana Franko, L'vov.

LAZ'KO, Ye.M.; LYAKHOV, Yu.V.; PIZNYUR, A.Y.

Double role of the gaseous phase of postmagmatic solutions in endogenetic mineral formation. Dokl. AN SSSR 161 no.6:1394-1396 0 '65. (MIRA 18:10)

1. L'vovskiy gosudarstvennyy universitet im. I.Franko. Submitted April 28, 1965.

LYAKHOVA, A.G.

Phenological studies of the Stalingrad Branch of the Geographical Society of the U.S.S.R. Izv.Vses.geog.ob-va 90 no.5:495 S-O '58. (MIRA 11:11)

(Stalingrad Province--Phenology)

LYAKHOVA, A.G., kand.geograficheskikh nauk, dotsent

Changes in the regime of the Don River as a result of the creation of the Tsymlyansk Hydroelectric Power Station. Uch. zap. Volg. gos. ped. inst. no.10:233-236 '59. (MIRA 14:11)
(Don River--Hydrology)
(Tsymlyansk Reservoir)

BELETSKIY, V.G.; PRUDNIKOVA, E.K.; MAKARENKOVA, Ye.D.; LYAKHOVA, L.A.

Hygiene of children's eyes. Vop.okh.mat.i det. 8 no.3:70-73 Mr '63. (MIRA 16:5)

1. Iz kafedr gigiyeny i glaznykh bolezney Smolenskogo meditsinskogo instituta i Smolenskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(EYE—CARE AND HYGIENE) (CHILDREN—CARE AND HYGIENE)

LYAKHOVA, L.F.

LITVIN-SEDOY, M.Z., kandidat fiz.-mat. nauk, redaktor; LYAKHOVA, L.F., redaktor; VILLENEVA, A.V., tekhnicheskiy redaktor.

[Correcting circuits in automatic regulation; collection of progressive articles] Korrektiruiushchie tsepi v avtomatike; sbornik perevodov statei. Moskva, Izd-vo inostrannoi lit-ry, 1954. 519 p. (MLRA 8:1)

(Electric circuits) (Automatic control)

L 2883-66 EWT(d)/FBD/FSS-2/EWT(1)/EPA(sp)-2/EEC(k)-2 AST/RB/GS/GW/WS-4

ACCESSION NR: AT5023588 UR/0000/65/000/000/0220/0227

AUTHOR: Berbasov, F. I.; Kerblay, T. S.; Kovalevskaya, Ye. M.; Lyakhova, L. I.

TITLE: Characteristics of short-wave radio communication with spaceships. 41 134

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 220-227

TOPIC TAGS: radio communication, spacecraft communication, radio wave propagation

ABSTRACT: Optimum frequencies for communication between distant points in space are studied under the assumption of an ionosphere of a spherically stratified structure with parameters that are uniform within the limits of a single discontinuity. The F2 layer is considered the basic reflecting layer. Data on the reception of signals from transmitters carried by the Vostok spaceships operating at about 20 Mc are analyzed. In most cases, communication was possible at 20 Mc, even though it was in excess of the standard MUF. To determine signal paths under real conditions, an analysis was made of the deviation of calculated MUF values from the actual radio communication frequencies. It was found that the deviation is essentially dependent on the hour of the day. When the receiving point was in the illuminated hemisphere-

Card 1/2

L 2883-66
ACCESSION NR: AT5023588

i.e., when the MUF at a control point nearest the receiving point was ≥ 20 Mc but lower near the spaceship — the probability of communication was considerably higher than when the receiving point was not illuminated. The ability to communicate with the Vostok spaceships at a frequency exceeding the standard MUF was attributed to anomalous propagation of radio waves. Signal paths, including reflection from the Es layer, play a significant role in spaceship communication. Reflections from the Es layer in the region nearest the receiving point and propagation along ricocheting paths can appreciably increase the upper limit of short-wave communication with spaceships located near the maximum of the F2 layer. It is concluded that when a spaceship is located below the maximum of the F2 layer, in addition to radio waves reflected from the F2 layer, waves of higher frequency can propagate along ordinary paths at the expense of other propagation paths. An important role in the propagation of frequencies higher than the standard MUF is played by the sporadic ionization in the F2 layer and by the presence of horizontal ionization gradients. Orig. art. has: 6 figures and 2 tables.
[JR]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: ES,EC

NO REF SOV: 005 OTHER: 005 ATD PRESS: 4109

Card 2/2

AUTHOR: Lyakhova , L.N. 26-58-6-23/56

TITLE: Ionospheric-Magnetic Storms (Ionosferno-magnitnyye buri)

PERIODICAL: Priroda, 1958, Nr 6, p 89-91 (USSR)

ABSTRACT: In September 1957, five very strong ionospheric-magnetic storms were observed, which had their origin in the increased solar activity of that month (202 solar spots in August as against 265 in September). NIIZMIR, the Scientific Research Institute of the Earth's Magnetism, the Ionosphere and Distribution of Radio Waves, has been conducting extensive observations of solar activity, comparing them with geophysical phenomena (Fig. 2). Two storms were especially strong. Both of them were closely related to the same most active area of the sun. Photographs of the photosphere and chromosphere taken during that time are shown in figure 1. The article deals in the first place with the consequences of the increased solar activity during the second revolution of the sun, when bright flocculent fields were observed, along with a series of chromospheric flares. These phenomena were followed by increased radio radiation and a very strong magnetic storm. A second powerful flare initiated new magnetic activity with the same consequences.

Card 1/2

Ionospheric-Magnetic Storms 26-58-6-23/56

There is 1 photo, 1 figure and 1 Soviet reference.

ASSOCIATION: Nauchno-issledovatel'skiy institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln (Krasnaya Pakhra) (Scientific Research Institute of the Earth's Magnetism, the Ionosphere and the Distribution of Radio Waves, Krasnaya Pakhra)

Card 2/2 1. Ionospheric disturbances

30940
S/570/60/000/017/010/012
E032/E514

9,9100

AUTHOR: Lyakhova, L.N.

TITLE: Short-range prognosis of the state of the ionosphere

SOURCE: Akademiya nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Trudy.no 17(27). Moscow, 1960. Rasprostraneniye radiovoln i ionosfery. 240-281

TEXT: This is a review paper. It is sub-divided as follows: 4
INTRODUCTION
CHAPTER I: AVERAGE PROPERTIES OF IONOSPHERIC DISTURBANCES.
1. Descriptive papers; 2. Average characteristics of the disturbed ionosphere (S_D, D_{st}); 3. Cartographic representation of the development of disturbances; 4. Possibilities of the average characteristics in quantitative prognosis.
CHAPTER II: TEMPORAL AND SPATIAL STABILITY OF THE CRITICAL FREQUENCIES OF THE F2-LAYER DURING DISTURBANCES.
1. Variation of f_o(F2) over short intervals of time; 2. Variation in f_o(F2) over periods of the order of a few hours; 3. Spatial variability of f_o(F2) during disturbances; 4. Present ideas on the

Card 1/5

Short-range prognosis of ...

cause of atmospheric disturbances.
CHAPTER III: METHOD OF CALCULATION OF THE CRITICAL FREQUENCIES OF THE F2-LAYER DURING DISTURBANCES.
1. Principles of quantitative prognosis; 2. 27-day periodicity of ionospheric disturbances; 3. Quantitative prognosis of f_o(F2) from the average characteristics; 4. Improvement of f_o(F2) using ionospheric data as a problem in the extrapolation of a random sequence; 5. Results of trial prognoses.
CONCLUSIONS.

The general aim of the review is to discover which of the results reported in the papers reviewed in Chapter I will be suitable in short-range prognosis. In spite of the complexity of the various ionospheric phenomena, there are certain characteristics which are found to be exhibited by the majority of storms. At medium altitudes these characteristics are as follows: 1) The most intensive magnetic disturbances are accompanied by a reduction in f_o(F2) and by an increase in the minimum effective frequencies of the F2-layer which are slightly delayed relative to the onset of the magnetic disturbances; 2) Occasionally, the ionospheric

Card 2/5

disturbances have a preliminary positive phase (increase in f_0(F2)) which continues for several hours; 3) Diffuse reflections are frequently observed during the disturbances, particularly at night; 4) The disturbances are accompanied by an increase in the absorption in low-lying layers which leads to the complete disappearance of reflections during intensive disturbances; 5) The sporadic E-layer frequently appears during the disturbances and screens reflections from layers lying above it. It is stated that the average properties of ionospheric disturbances are now beginning to emerge from the published data. Disturbances at medium latitudes may be both single-phase and two-phase. The positive-negative sequence is most frequently observed in two-phase storms; negative-positive sequence are more rare, i.e. the storms usually begin with positive deviations. Ionospheric storms are in most cases observed simultaneously with magnetic storms and their onset is slightly delayed relative to that of the magnetic storms. During magnetic disturbances, Δf_0(F2) has its maximum negative value at high and intermediate latitudes and decreases with decreasing latitude. It is found to change sign at latitudes of 20 to 30°. The diurnal variation is different

4

depending on the sign and the intensity of the disturbances, the time of the year, the latitude and so on. If there are very large changes in the critical frequency of F2, quantitative prognosis is not possible. It is, therefore, of great importance to determine the "stability" of f_o(F2) during disturbances, i.e. whether it is possible to predict f_o(F2) for a few hours after the disturbance. Analysis of published data has shown that during disturbances the values of f_o(F2) do not vary a great deal over periods of the order of 30 min, at least no more than during quiet periods. It was also found that f_o(F2) is more constant (over short periods of time) at high latitudes. The tendency of f_o(F2) to remain constant over short periods of time may be used to predict the critical frequency of F2 for a few hours after the storm by means of straightforward extrapolation. The probable error in such a prediction of f_o(F2) is said to be of the order of ± 0.4 Mc/s. An analysis of the spatial variability in f_o during disturbances has led to the following conclusions: 1) The data obtained at a single station can be extrapolated to other stations within rather narrow limits only (10° in latitude, 20° in longitude); 2) In order to improve the prediction of f_o(F2) from "running" ionospheric data,

30940

Short-range prognosis of ... S/570/60/000/017/010/012
E032/E114

it is essential to have information about the state of the ionosphere obtained at a series of stations; 3) Synoptic charts of $\Delta f_o(F2)$ are a convenient means of spatial extrapolation of $f_o(F2)$; 4) Examination of the temporal and spatial variability of the F2-layer during disturbances suggests that short period prognosis is entirely possible, at least over periods of a few hours.
N.D. Bulatov, A.I. Likhachev, Yu.D. Kalinin, T.N. Panov, N.V. Mednikova, N.P. Ben'kova, N.I. Potava, M.N. Gnevyshev, A.P. Nikolskiy and E.I. Mogilevskiy are mentioned in the article in connection with their contributions in this field.
There are 13 figures, 14 tables and 57 references; 16 Soviet-bloc and 41 non-Soviet-bloc. The four most recent English language references read as follows:

Ref.32: T. Obayashi. J.Radio Research Lab. Tokyo, 1, no.6, 55, 1954.
Ref.41: V.C.A. Ferraro. Indian J. Meteor. and Geophys., 5, special number, 157, 1954.
Ref.44: H.W. Babcock, H.D. Babcock. Astrophys.J., 121, no.2, 349, 1955.
Ref.54: D.W.G. Chappel, L.B. Hainsworth, J.M. Moorat, J. Atm. Terr. Phys., 3, 301, 1953.

Card 5/5

4

LYAKHOVA, L. N. ~~LEBEDINSKY, A.~~ I.

"Variability of the foF2 During Ionospheric Disturbances."((I-5-4))

report submitted for the Intl. Conf. on Cosmic Rays and Earth Storm (IUPAP) Kyoto, Japan 4-15 Sept. 1961.

31661
S/570/61/000/019/001/008
B139/B104

9,9100

AUTHOR: Lyakhova, L. N.

TITLE: Methods of forecasting magnetic disturbances in the ionosphere and short-range forecasting service for shortwave communication in the IZMIRAN

SOURCE: Akademiya nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Trudy, no. 19 (29), 1961, 1-17

TEXT: It is difficult to predict absorption of shortwave signals caused by increased ionization of the D layer since it is due to discharges in the chromosphere. Further disturbances are caused by geomagnetic storms which may occur without preceding eruptions when the active region passes the central meridian of the sun. Such storms start gradually, last longer, and follow the 27-day periodicity. Storms caused by eruptions commence suddenly, last for only 1 - 2 days, are very strong, and do not follow the 27-day periodicity. Slowly developing geomagnetic storms are released by corpuscular radiations with a density of only a few particles per cm^3 near the earth, sudden storms are caused by radiations with a density of several

Card 1/3

Methods of forecasting magnetic ...

hundred particles per cm^3. Establishment of a uniform index for the degree of ionospheric disturbances is difficult. The Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut (Arctic and Antarctic Scientific Research Institute) expresses the 24-hr activity by the total number of absorption disturbances of the normal ionosphere. For middle latitudes, foF2 is the most important factor for radio communication in the case of disturbances, and according to the ΔfoF2 value, the activity per hour is expressed in points. Disturbances of the ionosphere follow the 11-year cycle, storm maxima, however, lag approximately two years behind the maxima of sunspots. Throughout the year, the heaviest and most frequent geomagnetic storms occur in the equinoctal times. Disturbances tend to recur in periods a multiple the time of the sun's rotation (27.3 days). Within 24 hr, there are periods where disturbances cannot occur. They depend on the position of the sun, and also on the structure of the F2 layer. Prediction of disturbances is based on their correlation with solar processes. The 27-day cycle allows forecasting for about a month. For short-range forecasts, data on electromagnetic processes in active solar regions would be very valuable but they are not available as yet.

Card 2/3

Methods of forecasting magnetic ...

For short-range forecasts of the IZMIRAN, synoptic solar charts are used which are confined to the region between 60° north latitude and 60° south latitude. K-index and ΔfoF2 characteristics are also taken into account. The intensity of disturbances can only be forecast when variations of the magnetic field in active solar regions at different altitudes of the sun's atmosphere have been measured. To maintain shortwave communication, the frequencies at which broadcasting is possible during disturbances have also to be stated. Hence, the parameters of the ionosphere measured successively have to be extrapolated. In 1957-58, the following forecasts of the IZMIRAN had an accuracy of 1 point: monthly forecasts 68%, 5-day forecasts 70%, 12-hr forecasts 86%. N. V. Mednikov (Tr. konferentsii komissii po issledovaniyu Solutsa. M. 1957) is mentioned. There are 6 figures, 1 table, and 18 references: 10 Soviet and 8 non-Soviet. The four most recent references to English-language publications read as follows: Sinno, Rep. Ion.Res.Japan, 11, 195, 1957; Sinno, J. Radio Res. Laborat., 4, 17, 267, 1957; Sinno, Hakura, Rep. Ion. Res. Japan, 12, 285, 1958; J. H. Meek. J. Geophys. Res., 57, 177, 1952.

ASSOCIATION: IZMIRAN

Card 3/3

S/570/61/000/019/005/008
B104/B102

9.9100

AUTHOR: Lyakhova, L. N.

TITLE: Variation of the latitudinal stability of the critical frequencies of the F2 layer during disturbances

SOURCE: Akademiya nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Trudy, no. 19 (29), 1961, 48 - 51

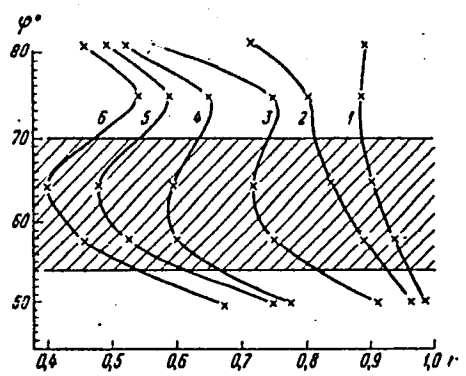
TEXT: A study has been made of the latitudinal variation of $\Delta foF2$ using data of observation posts situated in different latitudes (81.5 - 49.9°). Data from Canadian stations (Canadian Ionospheric Data, Ottawa, Canada, September 1957) and the Fletchers Station have been evaluated. The last-mentioned data are at the World Center of Data of the International Geophysical Year in Moscow. In addition, data from "Kosmicheskiye dannyye" (mesyachnyy obzor, sentyabr', 1957) were utilized. The mean value $\Delta foF2 = [foF2 - (foF2)_{mean}]/(foF2)_{mean}$ was determined, where foF2 are the values recorded every 15 min; $(foF2)_{mean}$ is the monthly mean. The linear

Card 1/3

correlation factor which indicates the coupling degree between the values of $\Delta foF2$ separated by different intervals (15 min, 30 min, 1 hr, 2 hrs, etc.), was determined. This factor is calculated from

$$r = (\Sigma xy - n\overline{xy}) / \sqrt{(\Sigma x^2 - n\overline{x^2}) \cdot (\Sigma y^2 - n\overline{y^2})},$$ where x and y are the values of $\Delta foF2$ pertaining to two definite times (Fig.1). The dependence of r on the latitude is ascribed to the fact that the stations of Baker Lake and Churchill are situated in the zone where northern lights are most frequent. The shaded section in Fig.1 indicates the longitudes where northern lights occur only in 50 out of 100 cases. Outside the zone of northern lights, the tendency to decreasing stability of $\Delta foF2$ is thus increased with increasing latitude. Inside this zone, the correlation factors are considerably lowered in comparison to their values outside the zone. This applies particularly to periods of more than one hour. There are 1 figure, 2 tables, and 4 references: 3 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Canadian Ionospheric Data, Canada, September, 1957.

Fig.1. Variation of the correlation factor r with varying latitude.
Legend: (1) 15-min periods; (2) 30-min periods; (3) 1-hr periods; (4) 2-hr periods; (5) 3-hr periods; (6) 4-hr periods.



Card 3/3

L 54984-65 EWT(d)/EWT(l)/EEC(k)-2/EWG(v)/EEC-4/EEC(t)/EWA(h)/FCC Pn-4/Po-4/Pe-5/
Pg-4/Pae-2/Pg-4/Pt-7/Peb/P1-4/P1-4 RB/GW/WS-4

ACCESSION NR: AP5010280 UR/0203/65/005/002/0351/0354 74
550.388.2 71
B

AUTHOR: Lyakhova, L. N.

TITLE: Estimation of the focussing effect in the propagation of a radiowave along a ricocheting trajectory

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 2, 1965, 351-354

TOPIC TAGS: radiowave propagation, ionospheric propagation, focussing effect, ricochet trajectory, field intensity, spherical reflector

ABSTRACT: The author notes that the field intensity of a spherical radiowave in free space (the so-called unabsorbed field strength) varies in inverse proportion to distance. A concise summary is given of the views of various authors on the focussing effect of a spherical reflecting surface on field intensity behavior. It is pointed out that the focussing effect is particularly well defined when the radiating element is located at a considerable height above the Earth's surface, since in this case there is no defocussing by the convex surface of the Earth. In those instances when the radiating element is at a considerable height above the surface, the angles of incidence of the radiowave increase in comparison with the maximal angles possible in the case of transmission from the surface of the Earth, with the wave propagating along a so-called ricocheting trajectory, that is, by

Card 1/3

consecutive reflections from the ionosphere until the development of favorable conditions for its return to Earth (e.g., inclination of the reflecting surface, scattering inhomogeneity, etc.). It is further noted that in field strength calculations for ricochet trajectory propagation, the focussing effect due to the sphericity of the ionosphere may be considerable, in as much as there is no compensation for this effect when reflections from the earth are absent. An estimation is made in this article of the magnitude of the focussing effect under conditions typical of radiowave propagation along a ricochet trajectory. In the author's approach, this estimation is made in a geometric optical approximation. The methodology employed involved two stages. In the first stage, the focussing is estimated without taking into account ray refraction in the ionosphere, that is, the beam of rays is assumed to propagate rectilinearly to the reflecting spherical surface, on which mirror reflection of the entire beam occurs. During the second stage, refraction of the rays in the ionosphere is considered for individual cases. As a result of this estimation of the effect of focussing on propagation over a ricocheting trajectory, the author concludes that, from the point of view of increasing the maximum permissible (usable) frequency, the most favorable ray paths with angles of incidence close to φ_{max} (where φ is the angle to the ionosphere) are at the same time the most favorable in the sense of increasing the field strength. "In conclusion, I wish to thank T. S. Kerblay

L 54994-65
ACCESSION NR: AP5010280

2

for his formulation of the problem and for a great deal of useful advice, as well as L. I. Kostina for carrying out the related computations." Orig. art. has: 3 figures and 5 formulas.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute for Terrestrial Magnetism, the Ionosphere and Radiowave Propagation, AN SSSR)

SUBMITTED: 05May64 ENCL: 00 SUB CODE: EC

NO REF SOV: 003 OTHER: 001

3/3
Card

L 38375-66 EWT(1)/FCC GW

ACC NR: AT6023730 SOURCE CODE: UR/2831/65/000/014/0086/0093

AUTHOR: Mogilevskiy, E. I.; Zevakina, R. A.; Lavrova, Ye. V.; Lyakhova, L. N. 63 B+1

ORG: none

TITLE: The nature of time-space distribution of ionospheric disturbances

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. V razdel programmy MGG: Ionosfera. Sbornik statey, no. 14, 1965. Ionosfernyye issledovaniya, 86-93

TOPIC TAGS: ionospheric disturbance, solar wind, F layer, geomagnetic field, solar plasma, critical frequency, solar corpuscular radiation, atmospheric ionization, atmospheric disturbance, ionospheric absorption, synoptic meteorology, map

ABSTRACT: Ionospheric perturbations are associated with solar corpuscular streams and the magnetosphere. An increased disturbance in the F2 layer at high latitudes is connected with additional ionization and structural disruptions of the lower ionosphere. Data obtained from 60 ionospheric stations during the IGY were used in analysis of the spatial distribution of anomalous absorption in the Northern and Southern Hemispheres. Absorption maps have been drawn and compared with solar processes, ionospheric disturbances, and perturbations in the geomagnetic field. Anomalous absorption begins several hours after a type-IV radio burst and covers the polar cap and the auroral zone. During weak absorption, preeminent "shock zones" and quasi-spiral regions are formed allowing direct entry of high-energy solar corpuscles. A corpuscular stream model with a forceless magnetic field was used for ionospheric disturbances. A forceless magnetic field is a necessary

Card 1/2

L 38375-66
ACC NR: AT6023730

C

condition for macroscopic motion if the solar plasma in the chromosphere and corona is compressible. Using this model, the appearance of solar low-energy cosmic rays is possible with the plasma cloud in which the burst and magnetic field were generated retaining injected protons. The geomagnetic disturbance is a consequence of the interaction of the magnetic field of the corpuscular stream with the magnetosphere. This approach to the problem does not require a solar plasma with a frozen magnetic field. Analysis of synoptic maps of the deviation distribution of critical frequencies in the F2 layer from the median value demonstrated the existence of regions with increased and decreased frequencies. Maximum negative deviations occurred in the geomagnetic latitudinal belt of 40—75° and coincided with the beginning of magnetic storms. Negative deviations were located in regions of magnetic anomalies. Positive deviations of critical frequency occur during weak geomagnetic disturbances and depend on the season. They appear in regions of magnetic anomalies. Variations of critical frequency in the F2 layer increase with the geomagnetic latitude, and they attain maximum value in the auroral zone. Orig. art. has: 4 figures. [EG]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 010/ OTH REF: 001/ ATD PRESS: 5042

Card 2/2 mlp

BELETSKIY, V.G.; BELGORODSKAYA, N.N.; LYAKHOVA, L.Ya.

State of artificial lighting in Smolensk schools. Gig. i san. 21 no.9:94 S '56. (MLRA 9:10)

1. Iz kafedry gigiyeny Smolenskogo meditsinskogo instituta.
(SMOLENSK--SCHOOL HOUSES--LIGHTING)

SHATVORYAN, E.P.; LYAKHOVA, N.D.

Diagnostic significance of the agglutination reaction in bacillary dysentery. Zhur. mikrobiol. epid. i immun. 31 no. 5:117 My '60. (MIRA 13:10)

(DYSENTERY) (AGGLUTINATION)

SMIRNOV, V. A.; ROZENFEL'D, V. M.; LYAKHOVA, R. P.

Efficiency in the full utilization of optimal pressure drop in city gas metworks. Gaz. delo no. 11:30-34 '63. (MIRA 17:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut po ispol'zovaniyu gaza v narodnom khozyaystve.

OGARKOV, Nikolay Alekseyevich; LYAKHOVA, Raisa Fedorovna; GRADISHCHEV, N.Ye., nauchn. red.; STAROVETOVA, V.G., red.

[Laboratory experiments for the course on "Science of materials" for finishers] Sbornik laboratornykh rabot po kursu "Materialovedenie" dlia otdelochnikov; metodicheskoe posobie dlia PTU. Moskva, Vysshaia shkola, 1964. 90 p. (MIRA 17:7)

SMIRNOV, V.A.; ROZENFEL'D, V.M.; LYAKHOVA, R.P.

Determining the optimum variant of the gas-supply system for centralized gas consumers. Gaz. delo no.7:27-30 '65. (MIRA 18:9)

1. Saratovskiy gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut po ispol'zovaniyu gaza v narodnom khozyaystve.

[redacted], V. [redacted].

[redacted], V. [redacted]: "Immediate and delayed results of electrocoagulatic operations on the eyeball." Based on material from the clinic of eye diseases, Molotov Medical Institute." Molotov State Medical Inst. Molotov, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Source: Knizhnaya letopis' No. 23 1956 Moscow

YERSHKOVICH, I.G., prof.; ARZAMASKOVA, G.A., kand. med. nauk; GOL'DFEL'D, N.G., kand. med. nauk; GORYACHEV, Yu.Ye., kand. med. nauk; LYAKHOVA, V.N., kand.med. nauk; REDKINA, Ye.I., kand. med. nauk; CHEPKASOVA, N.D., kand. med. nauk

"Manual on eye diseases; vol. 2 [illegible] Reviewed by I.G. Ershkovich and others. Vestn. oftal. 76 no.4:88-95 Jl-Ag '63 (MIRA 17:1)

PAVLOV, I.F.; LYAKHOVA, V.T.; ILYUSHCHENKO, V.N., agronom po zashchite rasteniy (Uzhgorod)

Readers' letters. Zashch. rast. ot vred. i bol. 8 no.4:14 Ap '63. (MIRA 16:10)

1. Zaveduyushchaya laboratoriyey zashchity rasteniy Lipetskoy sel'skokhozyaystvennoy opytnoy stantsii (for Lyakhova).
(Plants, Protection of)

DRIBINSKIY, M.B.; KLIMANSKIY, V.A.; LAZAREVA, V.G.; LYAKHOVA, Ye.A.

Bronchography under intravenous anesthesia in tracheal intubation. Khirurgiia 37 no.4:38-42 '61. (MIRA 14:4)

1. Iz otdeleniya grudnoy khirurgii (zav. otdeleniyem M.B. Dribinskiy) Kaliningradskoy oblastnoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach RSFSR kand.med.nauk V.V. Filippov).
(BRONCHI—RADIOGRAPHY) (INTRAVENOUS ANESTHESIA)

Lyakhova, Ye. P.

AUTHORS: Bravinskiy, V.G., Lyakhova, Ye.P. 32-8-23/61

TITLE: Determination of the Coefficients of Thermal Expansion of Materials With Regard to Welding. (Opredeleniye koeffitsiyentov termicheskogo rasshireniya materialov dlya spayev)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 8, pp.940-941 (USSR)

ABSTRACT: The paper describes the differential curves of thermal expansion which determine the differences of the absolute expansions of various materials on welding at any temperature of the interval. The Leitz universal differential dilatometer was used for the experiments. The course of the experiments: The samples of materials destined for welding were put into quartz tubes. A sample whose thermal expansion is close to normal linear conditions was taken as reference object. The obtained dilatograms perm itted to determine the divergence of the curves of thermal expansion of two confronted materials at a temperature interval from room temperature to 500°C. The speed of heating was controlled by a thermoregulator. Bars of 50 mm length and 3-3,5 mm ϕ served as samples. After every 100°C interval a light record was made on the curve. Only the heat curve was recorded. As an example the authors give the measurement of the thermal expansion coefficients of steatite- FeNi and lead glass-chromium steel. The calculation was made according to the formula:

$$\Delta\alpha = \frac{\Delta l/A}{l_0(T_K - T_H)}$$

, where $\Delta\alpha$- is the difference of the thermal ex-

Card 1/2

Determination of the Coefficients of Thermal Expansion of Materials With Regard to Welding.

pansion coefficient of the samples; Δl- the difference of the absolute expansions, the degree of increase = 586 (according to the axis OY); l_o - the initial length of the sample (50 mm); (T_K-T_H)- the final and initial temperatures. On the dilatogram the thermal relationship of the thermal expansion divergence of welding materials in the entire temperature interval is directly obtained. In that connection the possibility exists to calculate the difference between two coefficients, and to determine one coefficient when the other one is known. There is 1 illustration.

AVAILABLE: Library of Congress.

Card 2/2

ACCESSION NR: AT4012864 S/3069/63/000/000/0111/0120

AUTHOR: Kushnerev, D. M.; Lyakhovaya, I. V.

TITLE: Investigation of automatic welding of high temperature nickel alloys with ceramic fluxes

SOURCE: Svarka spetsial'ny*kh metallov i splavov. Kiev, Izd-vo AN UkrSSR, 1963, 111-120

TOPIC TAGS: welding, automatic welding, nickel welding, flux, ceramic flux, nickel alloy welding, high temperature nickel alloy

ABSTRACT: The principal problem in the welding of high temperature nickel alloys is the tendency to the formation of hot cracks and the necessity of obtaining the same heat resistance in the weld seam as in the base metal. The present investigation considered the possibility of using ceramic flux for this purpose. After reviewing the literature on the effects of alloying and modifying elements on crack formation, the authors report experiments in which alloy VL7-45U and EI-437B were welded with EI-868 and EI-395 wire under fluxes in which the alloying components were ferrotitanium, ferroaluminum, aluminum-niobium alloy, nickel-magnesium alloy and chromium-niobium alloy. These results showed that during welding with fine wire, such as SvKh20N10G6, the properties

Card 1/2

ACCESSION NR: AT4012864

of the weld seam are improved by decreasing the Al_2O_3 content of the flux. Work was also done with the welding of austenitic steel 1Kh18N9T in various fluxes, which indicated that sodium aluminate should be used in preference to liquid glass, thus lowering the Si content in the weld seam. Finally, the tendency to crack formation was found to be decreased by the introduction of niobium into the weld seam via the flux. Orig. art. has: 4 tables and 2 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 13Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 003 OTHER: 004

2/2

Card

IVANOV, Yuriy Vasil'yevich, doktor tekhn. nauk; LYAKHOVER, Lidiya Moiseyevna, inzh.; SLOUSHCHER, Kal'man Mironovich, inzh.; SHATSILLO, O.I., inzh., red.; FOMICHEV, A.G., red. izd-va; GVIRTS, V.L., tekhn. red.

[Experiment in the change-over to gas of the boiler units of industrial enterprises and electric power plants; from practices of the gazification of Leningrad industries] Opyt perevoda na gaz kotloagregatov promyshlennykh predpriiatii i elektrostantsii; iz opyta gazifikatsii leningradskoi promyshlennosti. Leningrad, 1961. 31 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Energetika, no.7) (MIRA 14:9)

(Gas burners) (Boilers)

LYAKHOVETS, L.V., starshiy prepodavatel'.

Hermetic sealing of passenger car bodies. Nauch.trudy MPI 30(44): 201-209 '55. (MLRA 9:11)
(Automobiles--Bodies)

LYAKHOVETS, Leonid Vasil'yevich, starshiy prepodavatel'

Electromagnetic clutch with a ferromagnetic filler. Izv.vys. ucheb.zav.; elektromekh. 1 no.11:126-133 '58. (MIRA 12:2)

1. Kafedra avtomobil'nogo transporta Novocherkasskogo politekhnicheskogo instituta.

(Clutches (Machinery))

GALANINA, Ol'ga Dmitriyevna; KATSENELENBOGEN, Abram Moiseyevich; ROMANOVA, L.A., retsenzent; LYAKHOVETS, M.S., retsenzent; GABOVA, D.M., red.

[Working principles, operation and maintenance of warp-knitting machines] Ustroistvo, rabota i obsluzhivanie osnovoviazal'nykh mashin. Moskva, "Legkaia industriia," 1964. 276 p. (MIRA 17:10)

LYAKHOVETSKAYA, D.D.

GIRSHFEL'D, R.V.; ZAKIN, M.M.; LYAKHOVETSKAYA, D.D.

Paragonimiasis with pulmonary tuberculosis [with summary in English]. Probl.tub. 35 no.8:113-116 '57. (MIRA 11:4)

1. Iz 11-go protivotuberkuleznogo dispansera Moskvy (glavnyy vrach G.V.Kotsubey)

(TUBERCULOSIS, PULMONARY, compl.
paragonimiasis of lungs (Rus))
(TREMATODE INFECTIONS, compl.
pulm. tuberc. in paragonimiasis of lungs (Rus))
(LUNG DISEASES, complications,
paragonimiasis with tuberc. (Rus))

OSHCHIPKOV, F.P.; FROLOV, V.K.; Prinimali uchastiye: SAVKINA, G.A., inzh.; LYAKHOVETSKAYA, M.A., inzh.; SLIVINSKIY, I.G., inzh.; PARASHINA, Z.V., tekhnik; NIKIFOROVA, Z.V., tekhnik

Founding of ZS-4 glass in pot furnaces. Stek. i ker. 18 no.7:5-8 Jl '61. (MIRA 14:7)

(Glass manufacture)

USSR/Pharmacology. Toxicology. Chemotherapeutical Preparations V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 37700

Author : Mirzon E. Z., Kaminskaya A. A. Lyakhovetskaya N. A.

Inst : ~~Institute~~ of Tuberculosis Academy of Medical Sciences USSR

Title : Results of the Clinical Test of Metazid (Resul'tati klinicheskovo ispitaniya metazida).

Orig Pub : Tr in-ta tuberkuleza Akad. med nauk SSSR, 1956, 8, 153-157

Abstract : Observations were conducted of 116 patients suffering from various forms of tuberculosis, mainly pulmonary. The dose of metazid (1) administered was 1 to 1.5 g in 24 hours, with a total 30 to 100 g. Beginning with the 2nd month supplementary

Card 1/3

USSR/Pharmacology. Toxicology. Chemotherapeutical Preparations V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 37700

Abstract : cavernous pulmenary tuberculosis. No side effects from 1 were noted. It is possible that the effect of 1 is greater than that of phthivazid.

Card 3/3

USSR/Pharmacology. Toxicology. Chemotherapeutical Preparations V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 37700

Abstract : therapy with PASK (normal doses) was prescribed. The clinical effect expressed in a diminution of tubercular intoxication, improved appetite and sleep, gain in weight, lower temperature, became evident 2 to 3 weeks after the beginning of the treatment. Rentgenological observations revealed a decrease of infiltrate modifications, condensation and resolution of foci, and a decrease in the areas of decomposition. BK in the sputum disappeared in some off the patients. 1 was found to be effective in the therapy of tuberculosis of lymphatic ganglia. The blood picture was marked by the normalization of the leukocyte formula and a decrease of ROE. A symptomatic effect expressed in the diminution of intoxication manifestations was noted in patients with fibrous-

Card 1/2 (2)

OYFEBAKH, M.I., prof.; LYAKHOVETSKAYA, N.A.

Timely detection of tuberculosis in adults. Trudy Inst. tub. AMN 7:171-183 '58. (MIRA 13:10)
(TUBERCULOSIS--DIAGNOSIS)

LYAKHOVETSKAYA, N.A.

Effectiveness of treating pulmonary tuberculosis with metazide.
Khim. i med. no.14:54-56 '60. (MIRA 14:12)

1. Dispansernyy sektor Instituta tuberkuleza (dir. - chlen-korrespondent AMN SSSR prof. N.A.Shmelev) AMN SSSR.
(TUBERCULOSIS) (METAZIDE)

VEDERNIKOV, Mikhail Ivanovich; RUDOY, Ivan Vasil'yevich; KATRENKO, D.A., nauchnyy red.; LYAKHOVETSKAYA, T.Ye., red.; TOKER, A.M., tekhn. red.

[Operator of compressor and pumping machinery in the chemical industry] Mashinist kompressornykh i nasosnykh ustanovok khimicheskoi promyshlennosti. Moskva, Proftekhizdat, 1963. 374 p. (MIRA 16:9)

(Chemical machinery) (Compressors) (Pumping machinery)

IOFA, Z.A.; LYAKHOVETSKAYA, Ye.I.; SHARIFOV, K.

Effect of halogen ions on adsorption of organic cations at an iron surface. C.R. Acad. Sci. U.R.S.S. '52, 84, 543-546. (MLRA 5:6)
(BA -AI Ap '53:337)

LYAKHOVETS-KAYA, Z. I.

The effect of inhibitors on the hydrogen brittleness of steel in sulfuric acid. Z. A. Iofa and Z. I. Lyakhovetskaya (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 86, 577–80(1952); cf. *C.A.* 46, 9378c.—The no. of bends before breaking (*a*) and the length of time under a const. load (1200 g.) before breaking (*b*) of a steel wire (diam. 0.3 mm., 0.1% C) after it was polarized (0.1 amp./sq. cm., 30 min. at 20°) in *N* and 6*N* H_2SO_4 was detd. The no. of bends (180°) before breaking in pure *N* H_2SO_4 and in the presence of KI, $(PhCH_2)_3N$ (I), I + KI, As_2O_3, As_2O_3 + KI, As_2O_3 + I, and As_2O_3 + I + KI were 39, 49, 56, 67, 27, 29, 43, and 63. In 6*N* H_2SO_4 and with the same sequence of inhibitors the nos. were: 40, 62, 51, 72, 28, —, 50, and 76 (the no. of bends before polarization were 80). The time before breaking in pure *N* H_2SO_4 and in the presence of As_2O_3, KI, As_2O_3 + I, and As_2O_3 + I + KI were >8 hrs., 6–7 min., >8 hrs., 2 hrs., and 3 hrs.; in 6*N* H_2SO_4 with the same inhibitors it was 5–6 hrs., 7 min., 8 hrs., 1 hr., and 2 hrs. (before polarization the wire broke under 7.5 kg.). The increase in H overvoltage in *N* and 6*N* H_2SO_4 was 0.29 and 0.23 v., resp. The absorption of H by spectroscopically pure Fe was slightly decreased in the presence of 0.005*N* Bu_4N + 0.05*N* KBr; the overvoltage increase was (at 0.025 amp./sq. cm.) 0.27 v. I. Bencowitz

(1)

NELAYEV, V.; FILIPENIN, M.; MEYLAKHS, M., master sporta; LYAKHOVETSKIY, G.

Facts, events, people. Kryl. rod. 13 no.3:18-19 Mr '62.
(MIRA 18:5)

1. Zamestitel' nachal'nika Upravleniya polyarnoy aviatsii Grazhdanskogo vozdushnogo flota (for Filipenin).

ACC NR: AR6026482 SOURCE CODE: UR/0274/66/000/004/A011/A011

AUTHOR: Lyakhovetskiy, G. Ya.

TITLE: One class of function generators

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 4A72

REF SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 26, 1965, 155-164

TOPIC TAGS: function generator, signal analysis, signal generator

ABSTRACT: The results are generalized of some works on the selection of optimal characteristics of inertialess nonlinear elements intended for electronic generation of signal spectra. Such generators are suitable for producing signals with various spectra and for separate control of the amplitudes of frequency components; these generators permit operation with FM signals and are not liable to transients; however, they require stabilization of the amplitude and shape of the input variable and they cannot produce signals with arbitrary phase spectra. The inertialess nonlinear systems ensure a principal possibility of producing harmonic and combined spectra. In some cases, the production of a specified-amplitude spectrum or nonsinusoidal periodic signals or a filtration somewhat similar to the action of linear selective systems (filters) is possible. A. K. [Translation of abstract]

SUB CODE: 09

Card 1/1 UDC: 621.372.061

ACC NR: AR6026481 SOURCE CODE: UR/0274/66/000/004/A011/A011

AUTHOR: Lyakhovetskiy, G. Ya.; Shteyn, V.K.

TITLE: Evaluating the duration of transient processes in oscillatory systems

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 4A68

REF SOURCE: Sb. Vopr. teorii i nadezhnosti apparatury i kanalov svyazi. Tashkent, Nauka, 1965, 206-213

TOPIC TAGS: electromagnetic transient, oscillatory system, electronic circuit, transient electromagnetic field

ABSTRACT: The possibility of using the method of simulating circuit for calculating oscillatory systems is explored. It is assumed that the systems possess selective properties; hence, the shape of the free process is close to harmonic. From the mathematical viewpoint, the method of simulating circuit is a version of the method of slowly-varying amplitudes. Clarity and simplicity stemming from the possibility of using obvious physical concepts are the advantages of this method. A rather limited range of systems for which the method yields simple results is its disadvantage. Two figures. Bibliography of 2 titles. L. S. [Translation of abstract]

SUB CODE: 09

Card 1/1 UDC: 621.391.14.018.782.3:538.56